

§ 110.1

10 CFR Ch. I (1–15 Edition)

Paperwork Elimination Act sec. 1704, 112 Stat. 2750 (44 U.S.C. 3504 note); Energy Policy Act of 2005, 119 Stat. 594.

Sections 110.1(b)(2) and 110.1(b)(3) also issued under 22 U.S.C. 2403.

Section 110.11 also issued under Atomic Energy Act secs. 54(c), 57(d), 122 (42 U.S.C. 2074, 2152).

Section 110.50(b)(3) also issued under Atomic Energy Act sec. 123 (42 U.S.C. 2153).

Section 110.51 also issued under Atomic Energy Act sec. 184 (42 U.S.C. 2234).

Section 110.52 also issued under Atomic Energy Act sec. 186, (42 U.S.C. 2236).

Sections 110.80–110.113 also issued under 5 U.S.C. 552, 554.

Sections 110.130–110.135 also issued under 5 U.S.C. 553.

Sections 110.2 and 110.42(a)(9) also issued under Intelligence Authorization Act sec. 903 (42 U.S.C. 2151 *et seq.*).

SOURCE: 43 FR 21641, May 19, 1978, unless otherwise noted.

Subpart A—General Provisions

§ 110.1 Purpose and scope.

(a) The regulations in this part prescribe licensing, enforcement, and rule-making procedures and criteria, under the Atomic Energy Act, for the export of nuclear equipment and material, as set out in §§ 110.8 and 110.9, and the import of nuclear equipment and material, as set out in § 110.9a. This part also gives notice to all persons who knowingly provide to any licensee, applicant, contractor, or subcontractor, components, equipment, materials, or other goods or services, that relate to a licensee's or applicant's activities subject to this part, that they may be individually subject to NRC enforcement action for violation of § 110.7b.

(b) The regulations in this part apply to all persons in the United States except:

(1) Persons who import or export U.S. Munitions List nuclear items such as uranium depleted in the isotope-235 and incorporated in defense articles. These persons are subject to the regulations promulgated pursuant to the Arms Export Control Act and administered by the Department of State, Directorate of Defense Trade Controls, and the Department of Justice, Bureau of Alcohol, Tobacco, Firearms and Explosives, as authorized by section 110 of the International Security and Development Cooperation Act of 1980.

(2) Persons who export uranium depleted in the isotope-235 and incorporated in commodities solely to take advantage of high density or pyrophoric characteristics. These persons are subject to the controls of the Department of Commerce under the Export Administration Act, as continued in force under Executive Order 13222 (August 22, 2001), as extended;

(3) Persons who export nuclear referral list commodities such as bulk zirconium, rotor and bellows equipment, maraging steel, nuclear reactor related equipment, including process control systems and simulators. These persons are subject to the licensing authority of the Department of Commerce pursuant to 15 CFR part 730 *et seq.*;

(4) Persons who import deuterium, nuclear grade graphite, or nuclear equipment other than production or utilization facilities. A uranium enrichment facility is not a production facility for the purposes of import; and

(5) Shipments which are only passing through the U.S. (in bond shipments) do not require an NRC import or export license; however, they must comply with the Department of Transportation/IAEA packaging, and State transportation requirements.

[49 FR 47197, Dec. 3, 1984; 49 FR 49841, Dec. 24, 1984, as amended at 55 FR 34519, Aug. 23, 1990; 56 FR 40692, Aug. 15, 1991; 58 FR 13001, Mar. 9, 1993; 61 FR 35602, July 8, 1996; 63 FR 1900, Jan. 13, 1998; 65 FR 70289, Nov. 22, 2000; 75 FR 44085, July 28, 2010]

§ 110.2 Definitions.

As used in this part,

Accelerator-produced radioactive material means any material made radioactive by a particle accelerator.

Agreement for cooperation means any agreement with another nation or group of nations concluded under section 123 of the Atomic Energy Act.

Atomic Energy Act means the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 *et seq.*).

Bulk material means any quantity of any one or more of the radionuclides listed in Table 1 of Appendix P to this part in a form that is:

(1) Not a Category 1 radioactive source;

(2) Not a Category 2 radioactive source;

Nuclear Regulatory Commission

§ 110.2

(3) Not plutonium-238; and

(4) Deemed to pose a risk similar to or greater than a Category 2 radioactive source.

Byproduct material means

(1) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or utilizing special nuclear material;

(2) The tailings or wastes produced by the extraction or concentration of uranium or thorium from ore (see 10 CFR 20.1003);

(3)(i) Any discrete source of radium-226 that is produced, extracted, or converted after extraction, before, on, or after August 8, 2005, for use for a commercial, medical, or research activity; or

(ii) Any material that has been made radioactive by use of a particle accelerator and is produced, extracted, or converted after extraction, before, on, or after August 8, 2005 for use for a commercial, medical, or research activity; and

(4) Any discrete source of naturally occurring radioactive material, other than source material, that—

(i) The Commission, in consultation with the Administrator of the Environmental Protection Agency, the Secretary of Energy, the Secretary of Homeland Security, and the head of any other appropriate Federal agency, determines would pose a threat similar to the threat posed by a discrete source of radium-226 to the public health and safety or the common defense and security; and

(ii) Before, on, or after August 8, 2005 is extracted or converted after extraction for use in a commercial, medical, or research activity.

Classified Information means Classified National Security Information under Executive Order 13526, as amended, or any predecessor or successor Executive Order and Restricted Data under the Atomic Energy Act.

Commission means the United States Nuclear Regulatory Commission or its duly authorized representatives.

Common defense and security means the common defense and security of the United States.

Conversion facility means any facility for the transformation from one uranium chemical species to another, including conversion of uranium ore concentrates to uranium trioxide (UO₃), conversion of UO₃ to uranium dioxide (UO₂), conversion of uranium oxides to uranium tetrafluoride (UF₄) or uranium hexafluoride (UF₆), conversion of UF₄ to UF₆, conversion of UF₆ to UF₄, conversion of UF₄ to uranium metal, and conversion of uranium fluorides to UO₂.

Depleted uranium means uranium having a percentage of uranium-235 less than the naturally occurring distribution of uranium-235 found in natural uranium (less than 0.711 weight percent uranium-235). It is obtained from spent (used) fuel elements or as byproduct tails or residues from uranium isotope separation.

Deuterium means deuterium and any deuterium compound, including heavy water, in which the ratio of deuterium atoms to hydrogen atoms exceeds 1:5000.

Discrete source means a radionuclide that has been processed so that its concentration within a material has been purposely increased for use for commercial, medical, or research activities.

Disposal means permanent isolation of radioactive material from the surrounding environment.

Dual-use means equipment and materials that may be used in nuclear or non-nuclear applications.

Effective kilograms of special nuclear material means:

(1) For plutonium and uranium-233, their weight in kilograms;

(2) For uranium enriched 1 percent or greater in the isotope uranium-235, its element weight in kilograms multiplied by the square of its enrichment expressed as a decimal weight fraction; and

(3) For uranium enriched below 1 percent in the isotope uranium-235, its element weight in kilograms multiplied by 0.0001.

Embargoed means that no nuclear material or equipment can be exported to certain countries under an NRC general license. Exports to embargoed

§ 110.2

10 CFR Ch. I (1–15 Edition)

countries must be pursuant to a specific license issued by the NRC and require Executive Branch review pursuant to § 110.41.

Exceptional circumstances means, with respect to exports from the United States of radioactive material listed in Table 1 of Appendix P of this part:

(1) Cases of considerable health or medical need as acknowledged by the U.S. Government and the government of the importing country;

(2) Cases where there is an imminent radiological hazard or security threat presented by one or more radioactive sources; and

(3) Cases in which the exporting facility or U.S. Government maintains control of the radioactive material throughout the period the material is outside of the U.S. and removes the material at the conclusion of this period.

Executive Branch means the Departments of State, Energy, Defense and Commerce.

Export means to physically transfer nuclear equipment or material to a person or an international organization in a foreign country, except DOE distributions as authorized in Section 111 of the Atomic Energy Act or Section 110 of the International Security and Development Cooperation Act of 1980.

General license means an export or import license effective without the filing of a specific application with the Commission or the issuance of licensing documents to a particular person. A general license is a type of license issued through rulemaking by the NRC and is not an exemption from the requirements in this part. A general license does not relieve a person from complying with other applicable NRC, Federal, and State requirements.

Heels means small quantities of natural, depleted or low-enriched uranium (to a maximum of 20 percent), in the form of uranium hexafluoride (UF₆) left in emptied transport cylinders being returned to suppliers after delivery of the product.

High-enriched uranium means uranium enriched to 20 percent or greater in the isotope uranium-235.

IAEA means the International Atomic Energy Agency.

Import means import into the United States.

Individual shipment means a shipment consisting of one lot of freight tendered to a carrier by one consignor at one place at one time for delivery to one consignee on one bill of lading. This lot may consist of:

(1) Only one item or

(2) A number of containers all listed on the same set of shipping documents. This one lot of freight or “distinct” shipment can be transported on the same carrier with other distinct shipments containing the same items as long as each shipment is covered by separate sets of shipping documents.

The phrase *introduced into a hearing* means the introduction or incorporation of testimony or documentary matter into the record of a hearing.

License means a general or specific export or import license issued pursuant to this part.

Licensee means a person authorized by a specific or a general license to export or import nuclear equipment or material pursuant to this part.

Low-enriched uranium means uranium enriched below 20 percent in the isotope uranium-235.

Low-level waste compact, as used in this part, means a compact entered into by two or more States pursuant to the Low-Level Radioactive Waste Policy Amendments Act of 1985.

Management means storage, packaging, or treatment of radioactive waste.

Medical isotope, for the purposes of § 110.42(a)(9), includes molybdenum-99, iodine-131, xenon-133, and other radioactive materials used to produce a radiopharmaceutical for diagnostic, therapeutic procedures or for research and development.

Natural uranium means uranium as found in nature, containing about 0.711 percent of uranium-235, 99.283 percent of uranium-238, and a trace (0.006 percent) of uranium-234.

NPT means the Treaty on the Non-Proliferation of Nuclear Weapons (TIAS 6839).

Non-nuclear weapon State means any State not a nuclear weapon State as defined in the Treaty on the Non-Proliferation of Nuclear Weapons. *Nuclear weapon state* means any State which

Nuclear Regulatory Commission

§ 110.2

has manufactured and exploded a nuclear weapon or other nuclear explosive device prior to January 1, 1967 (China, France, Russia, United Kingdom, United States).

Non-Proliferation Act means the Nuclear Non-Proliferation Act of 1978 (Pub. L. 95-242).

NRC Public Document Room means the facility at One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland, where certain public records of the NRC that were made available for public inspection in paper or microfiche prior to the implementation of the NRC Agencywide Documents Access and Management System, commonly referred to as ADAMS, will remain available for public inspection. It is also the place where NRC makes computer terminals available to access the Publicly Available Records System (PARS) component of ADAMS on the NRC Web site, <http://www.nrc.gov>, and where copies can be viewed or ordered for a fee as set forth in §9.35 of this chapter. The facility is staffed with reference librarians to assist the public in identifying and locating documents and in using the NRC Website and ADAMS. The NRC Public Document Room is open from 7:45 a.m. to 4:15 p.m., Monday through Friday, except on Federal holidays. Reference service and access to documents may also be requested by telephone (301-415-4737 or 800-397-4209) between 8:30 a.m. and 4:15 p.m., or by e-mail (PDR.Resource@nrc.gov), facsimile (301-415-3548), or letter (NRC Public Document Room, One White Flint North, 11555 Rockville Pike (first floor), Rockville, Maryland 20852-2738).

NRC records means any documentary material made by, in the possession of, or under the control of the Commission under Federal law or in connection with the transaction of public business as evidence of any of the Commission's activities.

NRC Web site, <http://www.nrc.gov>, is the Internet uniform resource locator name for the Internet address of the Web site where NRC will ordinarily make available its public records for inspection.

Nuclear grade graphite for nuclear end use means graphite having a purity level better than (*i.e.*, less than) 5 parts

per million boron equivalent, as measured according to ASTM standard C1233-98 and intended for use in a nuclear reactor. (Nuclear grade graphite for non-nuclear end use is regulated by the Department of Commerce.)

Nuclear reactor means an apparatus, other than an atomic weapon or nuclear explosive device, designed or used to sustain nuclear fission in a self-supporting chain reaction.

Nuclear reactor internals means the major structures within a reactor vessel that have one or more functions such as supporting the core, maintaining fuel alignment, directing primary coolant flow, providing radiation shields for the reactor vessel, and guiding in-core instrumentation.

Nuclear Referral List (NRL) means the nuclear-related, dual-use commodities on the Commerce Control List that are subject to the nuclear non-proliferation export licensing controls of the Department of Commerce. They are contained in 15 CFR part 774 of the Department of Commerce's Export Administration Regulations and are designated by the symbol (NP) as the reason for control.

Nuclear Suppliers Group (NSG) is a group of nuclear supplier countries which seeks to contribute to the non-proliferation of nuclear weapons through the implementation of Guidelines for nuclear exports and nuclear-related exports.

Obligations means the commitments undertaken by the U.S. Government or by foreign governments or groups of nations with respect to imports or exports of nuclear material (except by-product material) and equipment listed in §§ 110.8 and 110.9. Imports and exports of material or equipment subject to these commitments involve conditions placed on the transfer of the material or equipment, such as peaceful end-use assurances, prior consent for re-transfer, and exchanges of information on the import or export. The U.S. Government informs the licensee of obligations attached to material or equipment being imported into the United States and approves changes to those obligations.

Packaging means one or more receptacles and wrappers and their contents, excluding any special nuclear material,

source material or byproduct material, but including absorbent material, spacing structures, thermal insulation, radiation shielding, devices for cooling and for absorbing mechanical shock, external fittings, neutron moderators, nonfissile neutron absorbers and other supplementary equipment.

Participant means a person, identified in a hearing notice or other Commission order, who takes part in a hearing conducted by the Commission under this part, including any person to whom the Commission grants a hearing or leave to intervene in an export or import licensing hearing, either as a matter of right or as a matter of discretion.

Particle accelerator means any machine capable of accelerating electrons, protons, deuterons, or other charged particles in a vacuum and of discharging the resultant particulate or other radiation into a medium at energies usually in excess of 1 megaelectron volt. For purposes of this definition, “accelerator” is an equivalent term.

Person means any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency, other than the Commission or the Department of Energy, except that the Department of Energy shall be considered a person within the meaning of the regulations in this part to the extent that its activities are subject to the licensing and related regulatory authority of the Commission pursuant to section 111 of the Atomic Energy Act; any State or political subdivision of, or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and any legal successor, representative, agent, or agency of the foregoing.

Physical security or Physical protection means measures to reasonably ensure that source or special nuclear material will only be used for authorized purposes and to prevent theft or sabotage.

Production facility means any nuclear reactor or plant specially designed or used to produce special nuclear material through the irradiation of source material or special nuclear material,

the chemical reprocessing of irradiated source or special nuclear material, or the separation of isotopes, other than a uranium enrichment facility for purposes of import.

Public health and safety means the public health and safety of the United States.

Radioactive material means source, byproduct, or special nuclear material.

Radioactive waste, for the purposes of this part, means any material that contains or is contaminated with source, byproduct, or special nuclear material that by its possession would require a specific radioactive material license in accordance with this Chapter and is imported or exported for the purposes of disposal in a land disposal facility as defined in 10 CFR part 61, a disposal area as defined in Appendix A to 10 CFR part 40, or an equivalent facility; or recycling, waste treatment or other waste management process that generates radioactive material for disposal in a land disposal facility as defined in 10 CFR part 61, a disposal area as defined in Appendix A to 10 CFR part 40, or an equivalent facility. Radioactive waste does not include radioactive material that is—

(1) Of U.S. origin and contained in a sealed source, or device containing a sealed source, that is being returned to a manufacturer, distributor or other entity which is authorized to receive and possess the sealed source or the device containing a sealed source;

(2) A contaminant on any non-radioactive material (including service tools and protective clothing) used in a nuclear facility (an NRC- or Agreement State-licensed facility (or equivalent facility) or activity authorized to possess or use radioactive material), if the material is being shipped solely for recovery and beneficial reuse of the non-radioactive material in a nuclear facility and not for waste management purposes or disposal;

(3) Exempted from regulation by the Nuclear Regulatory Commission or equivalent Agreement State regulations;

(4) Generated or used in a U.S. Government waste research and development testing program under international arrangements;

Nuclear Regulatory Commission

§ 110.2

(5) Being returned by or for the U.S. Government or military to a facility that is authorized to possess the material; or

(6) Imported solely for the purposes of recycling and not for waste management or disposal where there is a market for the recycled material and evidence of a contract or business agreement can be produced upon request by the NRC.

NOTE: The definition of *radioactive waste* in this part does not include spent or irradiated fuel.

Radiopharmaceutical, for the purposes of § 110.42(a)(9), means a radioactive isotope that contains byproduct material combined with chemical or biological material and is designed to accumulate temporarily in a part of the body for therapeutic purposes or for enabling the production of a useful image for use in a diagnosis of a medical condition.

Recipient country, for the purposes of § 110.42(a)(9), means Canada, Belgium, France, Germany, and the Netherlands.

Restricted destinations means countries that are listed in § 110.29 based on recommendations from the Executive Branch. These countries may receive exports of certain materials and quantities under a general license, but some exports to restricted destinations will require issuance of a specific license by the NRC including Executive Branch review pursuant to § 110.41.

Retransfer means the transport from one foreign country to another of nuclear equipment or nuclear material previously exported from the United States, or of special nuclear material produced through the use of source material or special nuclear material previously exported from the United States.

Sealed source means any special nuclear material or byproduct material encased in a capsule designed to prevent leakage or escape of that nuclear material.

Secretary means the Secretary of the Commission.

Source material means:

(1) Natural or depleted uranium, or thorium, other than special nuclear material; or

(2) Ores that contain by weight 0.05 percent or more of uranium, thorium or depleted uranium.

Special nuclear material means plutonium, uranium-233 or uranium enriched above 0.711 percent by weight in the isotope uranium-235.

Specific activity means the radioactivity of a radionuclide per unit mass of that nuclide, expressed in the SI unit of Terabequerels per gram (TBq/g). Values of specific activity are found in Appendix A to part 71 of this chapter.

Specific license means an export or import license document issued to a named person and authorizing the export or import of specified nuclear equipment or materials based upon the review and approval of an NRC Form 7 application filed pursuant to this part and other related submittals in support of the application.

Storage means the temporary holding of radioactive material.

Target means material subjected to irradiation in an accelerator or nuclear reactor to induce a reaction or produce nuclear material.

Transfer means the transfer of possession from one person to another person.

Transport means the physical movement of material from one location to another.

Treatment means any method, technique, or process, including storage for radioactive decay, designed to change the physical, chemical or biological characteristics or composition of any radioactive material.

Tritium means not only tritium but also includes compounds and mixtures containing tritium in which the ratio of tritium to hydrogen by atoms exceeds one part in 1,000.

United States, when used in a geographical sense, includes Puerto Rico and all territories and possessions of the United States.

Uranium enrichment facility means:

(1) Any facility used for separating the isotopes of uranium or enriching uranium in the isotope 235, except laboratory scale facilities designed or used for experimental or analytical purposes only; or

(2) Any equipment or device, or important component part especially designed for such equipment or device,

§ 110.3

capable of separating the isotopes of uranium or enriching uranium in the isotope 235.

Utilization facility means:

- (1) Any nuclear reactor, other than one that is a production facility and
- (2) Any of the following major components of a nuclear reactor:
 - (i) Reactor pressure vessel (designed to contain the core of a nuclear reactor);
 - (ii) Reactor primary coolant pump or circulator;
 - (iii) "On-line" reactor fuel charging and discharging machine; and
 - (iv) Complete reactor control rod system.
- (3) A utilization facility does not include the steam turbine generator portion of a nuclear power plant.

[43 FR 21691, May 19, 1978]

EDITORIAL NOTE: For FEDERAL REGISTER citations affecting §110.2, see the List of CFR Sections Affected, which appears in the Finding Aids section of the printed volume and at www.fdsys.gov.

§ 110.3 Interpretations.

Except as authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part other than a written interpretation by the Commission's General Counsel is binding upon the Commission.

§ 110.4 Communications.

Except where otherwise specified in this part, all communications and reports concerning the regulations in this part should be addressed to the Deputy Director of the NRC's Office of International Programs, either by telephone to (301) 415-2344; by mail to the U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; by hand delivery to the NRC's offices at 11555 Rockville Pike, Rockville, Maryland; or, where practicable, by electronic submission, for example, via Electronic Information Exchange, or CD-ROM. Electronic submissions must be made in a manner that enables the NRC to receive, read, authenticate, distribute, and archive the submission, and process and retrieve it a single page at a time. Detailed guidance on making electronic submissions can be obtained by visiting the NRC's Web site at [http://](http://www.nrc.gov/site-help/e-submittals.html)

10 CFR Ch. I (1-1-15 Edition)

www.nrc.gov/site-help/e-submittals.html; by e-mail to MSHD.Resource@nrc.gov; or by writing the Office of Information Services, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001. The guidance discusses, among other topics, the formats the NRC can accept, the use of electronic signatures, and the treatment of nonpublic information.

[68 FR 58824, Oct. 10, 2003, as amended at 74 FR 62686, Dec. 1, 2009]

§ 110.5 Licensing requirements.

Except as provided under subpart B of this part, no person may export any nuclear equipment or material listed in §110.8 and §110.9, or import any nuclear equipment or material listed in §110.9a, unless authorized by a general or specific license issued under this part.

[56 FR 24684, May 31, 1991, as amended at 58 FR 13002, Mar. 9, 1993]

§ 110.6 Retransfers.

(a) Retransfer of any nuclear equipment or material listed in §§110.8 and 110.9 (except byproduct material), including special nuclear material produced through the use of equipment, source material, or special nuclear material bearing obligations to the United States pursuant to an agreement for cooperation, requires authorization by the Department of Energy, unless the export to the new destination is authorized by the NRC under a specific or general license or an exemption from licensing requirements. See definition of "obligations" in §110.2.

(b) Requests for authority to retransfer are processed by the Department of Energy, National Nuclear Security Administration, Office of International Regimes and Agreements, Washington, DC 20585.

[75 FR 44087, July 28, 2010]

§ 110.7 Information collection requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget (OMB) for approval as required by the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*). The NRC